HP Z220 Workstation

More power, less energy, still affordable.

Our most affordable, no-compromise workstations.

The HP Z220 Series delivers workstation performance and energy efficiency at prices you'd expect from a desktop PC. You'll get the performance you need with next-generation Intel® Xeon® and Intel® Core™ processors, four integrated USB 3.0 ports, new professional graphics options, and enterprise-class memory technologies.

Choose an expansive Convertible Minitower (CMT) or a compact Small Form Factor (SFF) design that's 65% smaller—perfect for tight spaces. Either one fits your workspace and your work style.

Professional work demands professional graphics.

Experience a cost-effective graphics boost with the enhanced next-generation Intel® HD Graphics. For even greater performance, choose from the latest professional graphics cards from NVIDIA and AMD.

High performance. No sweat.

Increase performance and reduce energy consumption with next-generation 22nm processors, including the Intel® Xeon® processor E3-1200v2 family (with Intel® HD Graphics P4000 on selected processors) and 3rd generation Intel® Core™ processors.[1,2,3] Unleash your creativity without thinking twice about performance.

Get going at a moment's notice with the Intel® Smart Response Technology[4] (SRT) SSD option that gives you faster boot up times and application responsiveness. Because no one should ever have to wait.

More possibilities. More productivity.

Connect to external storage devices and transfer data at blazing fast speeds using integrated USB 3.0. Boost performance on memory intensive applications with up to 32GB of 1600MHz DDR3 memory[5] and enjoy the confidence of running even sophisticated models without slowing you down.

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HP recommends Windows.

	HP Z220 CMT	HP Z220 SFF
Form Factor	Convertible minitower	Small Form Factor; convertible—may be used as desktop or tower; optional tower stand available; optional Integrated Work Center (IWC) available
Available Operating Systems	Windows 7 Professional 32-Bit* Windows 7 Professional 64-bit* Windows 7 Ultimate 64-bit* Windows 8 Pro 64-bit Windows 8 Pro Downgrade to Windows 7 Professional 32-bit Windows 8 Pro Downgrade to Windows 7 Professional 64-bit HP Linux Installer Kit SUSE Linux Enterprise Desktop 11 (90 day license) Red Hat Enterprise Linux Desktop/Workstation (1 year paper license; no preinstalled OS)	

Available Processors[1,2,3]

Processor	GHz	Max Turbo GHz	Cache	Memory	Cores	Hyper-Threading[6]	Intel® vPro™ Technology	Intel® HD Graphics
Intel® Pentium® Processor G2020	2.90	–	3 MB	1066 MHz	2	N	N	Yes
Intel Core™ i3-3220 processor	3.30	–	3 MB	1600 MHz	2	N	N	2500
Intel Core™ i3-3240 processor	3.40	–	3 MB	1600 MHz	2	N	N	2500
Intel Core™ i5-3470 processor	3.20	3.60	6 MB	1600 MHz	4	N	Y	2500
Intel Core™ i5-3570 processor	3.40	3.80	6 MB	1600 MHz	4	N	Y	2500
Intel Core™ i7-3770 processor	3.40	3.90	8 MB	1600 MHz	4	Y	Y	4000
Intel Xeon® processor E3-1225v2	3.20	3.60	8 MB	1600 MHz	4	N	Y	P4000
Intel Xeon processor E3-1230v2	3.30	3.70	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1240v2	3.40	3.80	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1245v2	3.40	3.80	8 MB	1600 MHz	4	Y	Y	P4000
Intel Xeon processor E3-1270v2	3.50	3.90	8 MB	1600 MHz	4	Y	Y	No
Intel Xeon processor E3-1280v2	3.60	4.00	8 MB	1600 MHz	4	Y	Y	No

	HP Z220 CMT	HP Z220 SFF
Chipset	Intel® C216 chipset	
Memory[5,7]	4 DIMM slots, up to 32 GB ECC/non-ECC, DDR3 1600 MHz (ECC/non-ECC choice and actual memory speed dependent on processor capability)	
Drive Controllers[8]	Integrated SATA Controller, RAID 0,1 supported: 4 ports 3 Gb/s, 2 ports 6 Gb/s	Integrated SATA Controller, RAID 0,1 supported: 2 ports 3 Gb/s, 2 ports 6 Gb/s
Storage[9]	Up to (3) 3.5-inch 7200 rpm SATA drives: 250, 500 GB, 1, 2 TB (6 TB max) Up to (3) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (3 TB max) Up to (3) 2.5-inch SATA solid state drives: 128, 256 GB (0.75 TB max) Up to (2) 2.5-inch 512 GB solid state drives (1 TB max) Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB, 256 GB max Up to (1) 2.5-inch SATA self-encrypting 7200 rpm boot drive (SED): 500 GB, 500 GB max	Up to (2) 3.5-inch 7200 rpm SATA drives: 250, 500 GB, 1, 2 TB (4 TB max) Up to (2) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (2 TB max) Up to (2) 2.5-inch SATA SSD drives: 128, 256 GB (0.5 TB max) Up to (2) 2.5-inch 512 GB solid state drives (1 TB max) Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB, 256 GB max Up to (1) 2.5-inch SATA self-encrypting 7200 rpm boot drive (SED): 500 GB, 500 GB max
Optical Storage[10,11]	DVD-ROM, DVD+/-RW DL Super Multi, HP Blu-ray Writer, HP 22-in-1 Media Card Reader	
Drive Bays	3 external 5.25-inch bays, 3 internal 3.5-inch HDD bays	1 internal 3.5-inch bay, and 1 shared with external 3.5-inch bay; 1 external 5.25-inch bay
Expansion Slots	1 PCIe Gen3 x16, 1 PCIe Gen2 x4/x16, 1 PCIe Gen2 x4 slot/x8, 2 PCIe Gen2 x1, 2 PCI	1 PCIe Gen3 x16, 1 PCIe Gen2 x4/x16, 1 PCIe Gen2 x1, 1 PCI. All slots are Low Profile.
Available Graphics	Professional 2D: NVIDIA NVS 300, NVIDIA NVS 310, NVIDIA NVS 510 Entry 3D: AMD FirePro™ V3900, NVIDIA Quadro 410, NVIDIA Quadro K600 Mid-range 3D: NVIDIA Quadro K2000 High-end 3D: AMD FirePro™ W7000 (AMO*** only), NVIDIA Quadro K4000 (AMO*** only)	Up to Intel® HD Graphics 4000 (Intel® Core™ Processors) Intel® HD Graphics P4000 (Intel® Xeon® E3-12x5 Processors) Professional 2D: NVIDIA NVS 300, NVIDIA NVS 310, NVIDIA NVS 510 Entry 3D: AMD FirePro™ V3900, NVIDIA Quadro 410, NVIDIA Quadro K600
Audio	High Definition Integrated Realtek ALC221 Audio and integrated speaker; optional Creative Reon 3D PCIe Audio Card; optional HP Thin USB Powered Speakers	High Definition Integrated Realtek ALC221 Audio and integrated speaker, optional HP Thin USB Powered Speakers
Network	Intel 82579 GbE Network Connection; Optional HP X520 10GbE Dual Port Adapter; Optional HP 10GbE SFP+ SR Transceiver; Infineon TPM 1.2 controller	Intel 82579 GbE Network Connection
Remote Management	Intel® vPro™ with Intel® AMT 8.0	
Ports	Front: 2 USB 3.0, 1 USB 2.0, 1 IEEE 1394a (optional with PCIe card), 1 microphone in, 1 headphone out Rear: 2 USB 3.0, 4 USB 2.0, 1 audio in, 1 audio out, 1 serial (optional), 1 parallel (optional), 2 PS/2, RJ-45 (NIC), 1 microphone in, 1 DVI-I single link and 1 DisplayPort (for use with Intel HD Graphics); optional 2 IEEE 1394b ports (PCIe card) Internal: 5 USB 2.0 ports	Front: 4 USB 2.0, 1 microphone in, 1 headphone out Rear: 4 USB 3.0, 2 USB 2.0, 1 audio in, 1 audio out, 1 standard/1 optional serial port, 1 parallel (optional); 2 PS/2, RJ-45 (NIC), 1 VGA and 1 DisplayPort (for use with Intel HD Graphics); optional 2 IEEE 1394b ports (PCIe card) Internal: 4 USB 2.0 ports
Input Devices	HP PS/2 keyboard, HP USB keyboard, HP USB CCID smart card keyboard, HP PS/2 mouse, HP USB optical mouse, HP USB 3-button optical mouse, HP USB laser mouse, USB SpaceExplorer, USB SpacePilot	
Dimensions (H x W x D)	17.6 x 7 x 17.9 in (44.76 x 17.78 x 45.43 cm)	Standard desktop orientation: 3.95 x 13.3 x 15.0 in (10.0 x 33.8 x 38.1 cm)
Power Supply	400-watt 90% efficient power supply	240-watt 90% efficient power supply
Compatible Displays (screen size diagonally measured)	HP DreamColor LP2480zx Professional Display (24-inch diagonal widescreen), HP ZR30w 30-inch S-IPS LCD Monitor, HP ZR2740w 27-inch LED Backlit IPS Monitor, HP ZR2440w 24-inch LED Backlit IPS Monitor, HP LP2330w 23-inch LCD Backlit IPS Monitor, HP ZR2240w 21.5-inch LED Backlit IPS Monitor, HP ZR2040w 20-inch LED Backlit IPS Monitor	
Warranty[12]	Limited three-year Mon-Fri 8-5 next business day, parts, labor and 24x7 phone support, terms and conditions may vary. One-year warranty option available in selected countries.	

Screen images courtesy of Autodesk

* This system may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See microsoft.com/windows/windows-7/ for details.

** HP Z220 CMT only

*** After-Market Option

1 Multi-Core technologies are designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefits; Not all customers or software applications will necessarily benefit from use of these technologies.

2 64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See intel.com/info/em64t for more information.

3 Intel's numbering is not a measurement of higher performance.

4 Requires a 2nd gen Intel® Core™ processor, enabled chipset, Intel Rapid Storage technology software, and a properly configured hybrid drive (HDD + small SSD). Intel® Smart Response Technology is sold as an optional feature and is only available on HP's 2012 Workstations, HP EliteBooks and HP UltraBook. Depending on system configuration, your results may vary.

5 Each processor supports up to 2 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.

6 The hyper-threading feature is designed to improve performance of multi-threaded software products; please contact your software provider to determine software compatibility. Not all customers or software applications will benefit from the use of hyperthreading. Go to intel.com/info/hyperthreading for more information, including which processors support HT Technology.

7 Intel® Xeon E3, Intel Core i3 and Intel Pentium processors can support either ECC or non-ECC memory when used with the workstation chipset. Intel Core i5/i7 processors only support non-ECC memory.

8 SATA hardware RAID is not supported on Linux systems. The Linux kernel, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware-based RAID. Please visit h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux.

9 For hard drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less.

10 Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copyright protected materials. Intended for creation and storage of your original material and other lawful uses. Note that DVD-RAM cannot read or write to 2.6 GB Single Sided/5.2 GB Double Sided – Version 1.0 media.

11 As Blu-ray is a new format containing new technologies, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD DVD movies cannot be played on this workstation.

12 HP Care Pack Services extend service contracts beyond the standard warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at hp.com/go/carepack. Service levels and response times for HP Care Packs may vary depending on your geographic location.

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4AA4-1853ENUC, August 2013